



Be a part of tomorrow's medical **breakthroughs**

Explore the Power and Promise of Biotechnology

Have you wondered how cancer treatments are discovered? How about COVID-19 diagnostic tests, or the latest gene and cell therapies? These are all the products of biotechnology, and they are transforming the future of medicine.

Biotechnology is the science behind medicine. It applies the molecules and processes found in nature to the improvement of human lives. It encompasses the molecular tools and techniques used in medical research and in the development of diagnostics, therapeutics, and more.

If you are interested in working to develop cures for diseases like cancer or Alzheimer's, or in using biological processes to discover better diagnostics or vaccines, then biotechnology may be the path for you!

The HOSA Competitive Event in Biotechnology

Bio-Rad Laboratories is a global leader in products for life science research, clinical diagnostics, and life science education. We are proud to sponsor the **HOSA Competitive Event in Biotechnology**, which encourages HOSA members to explore career options and understand how biotechnology will impact the future of medicine.

Visit [bio-rad.com/explorer](https://www.bio-rad.com/explorer) for more information about how Bio-Rad supports life science education.

HOSA Competitive Event in Biotechnology

Top-scoring competitors from Round One move on to Round Two.

Round One: Written Test Topics

- Industry practices and careers
- Biotechnology in health
- Governmental regulation of biotechnology
- Basic laboratory skills: PPE, preparing solutions, and pipetting
- Microbiology and cell culture
- DNA structure and analysis
- Bacterial transformation
- Polymerase chain reaction (PCR)
- Protein structure, function, and analysis
- Immunological applications



Round Two: Hands-On Skills Assessment

- Using micropipets and transfer pipets
- Restriction digestion
- DNA gel electrophoresis
- DNA gel interpretation
- Bradford protein quantitation assay
- Bacterial transformation
- Calculation of transformation efficiency
- Qualitative ELISA

Visit HOSA.org for official event guidelines and grading rubrics.

Event Preparation Resources from Bio-Rad



Biotechnology: A Laboratory Textbook

The primary resource for the Biotechnology Competitive Event



HOSA Biotechnology Competitive Event YouTube Playlist

Videos that demonstrate the hands-on skills in the Round Two Skills portion of the competitive event

Visit bio-rad.com/HOSA to find these and other resources to help you prepare for the Competitive Event in Biotechnology.

Opportunity to Learn and Earn

The Bio-Rad biotechnology textbook is aligned with the Biotechnician Assistant Credentialing Exam (BACE), which certifies core skills for work in biotechnology labs.

Let your preparation for the competitive event also serve as preparation for this industry-recognized credential and give yourself a competitive edge on joining the workforce – in industrial or in academic labs!



Visit

biotility.research.ufl.edu/bace for more information.

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